

Notice of Allowability

Application No.

10/713,718

Applicant(s)

THOMPSON ET AL.

Examiner

Yaima Campos

Art Unit

2185

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 12, 2006.
2. ☒ The allowed claim(s) is/are 1-13 and 15-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

I. EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with James Hunt "Hunter" Yancey, Jr. (Registration No. 53,809) on August 11, 2006.

3. The application has been amended as follows:

4. **Claim 11** is replaced by the following:

11. (currently mended) A method, comprising:

calculating a rank of ~~the~~ a DDR memory component from a command tenure;

extracting at least one timing adjustment signal from a look-up table associated with the calculated rank; and

using the at least one timing adjustment signal to adjust a gating circuit for gating a data strobe signal to account for timing variations for reading data in a memory component [[:]]

wherein the at least one timing adjustment signal comprises a first portion and a second portion,

wherein the first portion is used to grossly adjust the gating signal using integer multiples of a clock signal, and

wherein the second portion is used to finely adjust the position of the gating signal using fractions of the clock signal.

5. **Claim 14** is cancelled.

II. RELEVANT ART CITED BY THE EXAMINER

1. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See **MPEP 707.05(c)**.
2. The following reference teaches write clock and data window tuning based on rank select.

U.S. PATENT NUMBER

US 2003/0140208

III. REASONS FOR ALLOWANCE

6. The following is an examiner's statement of reasons for allowance:
7. Per the instant office action, **claims 1-13 and 15-20** are considered as allowable subject matter.
8. As per **claim 1**,

The primary reasons for allowance of claim **1** in the instant application is the combination with the inclusion in these claims of the limitation a system comprising a first timing adjustment signal associated with a rank of a memory component and a second timing adjustment signal associated with the memory component wherein "**further adjusting the data strobe signal using the second portion by an amount less than the amount of the first**

portion.” The prior art of record including the references under section **II** above neither anticipates nor renders obvious the above-recited combination.

9. As per **claim 11**

The primary reasons for allowance of claim **11** in the instant application is the combination with the inclusion in these claims of the limitation a method comprising a timing adjustment signal for a DDR memory component wherein **“the first portion is used to grossly adjust the gating signal using integer multiples of a clock signal, and wherein the second portion is used to finely adjust the position of the gating signal using fractions of the clock signal.”** The prior art of record including the references under section **II** above neither anticipates nor renders obvious the above-recited combination.

10. As per **claim 17**

The primary reasons for allowance of claim **17** in the instant application is the combination with the inclusion in these claims of the limitation a memory cell comprising an adjustable pipeline wherein **“adjusting timing of a gating signal by a length of time equal to the value of the fractional portion of the first adjustment signal... a delay clock circuit operable for: imparting a predefined time delay on the gated strobe signal.”** The prior art of record including the references under section **II** above neither anticipates nor renders obvious the above-recited combination.

11. Dependent **claims 2-10, 12-13, 15-16 and 18-20** are allowable at least for the reasons recited above as including all of the limitations of the allowable independent base claims upon which they depend.

12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

IV. DIRECTION OF FUTURE CORRESPONDENCES


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaima Campos whose telephone number is (571)272-1232. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.

IMPORTANT NOTE

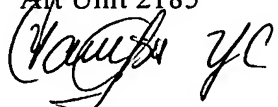
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on (571) 272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 11, 2006


SANJIV SHAH
PRIMARY EXAMINER

Yaima Campos
Examiner
Art Unit 2185

 yc.